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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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May 24, 2001

Chuck Semborski, Environmental Supervisor
Energy West Mining Company
P.O. Box 310
Huntington, Utah 84528

Re: Conditional Approval of Miller Canyon As-builts for Phase I Bond Release (Formerly Phase III Bond Release), PacifiCorp, Cottonwood/ Wilber Mine, ~~0015019-BR99D~~, Outgoing File

Dear Mr. Semborski:

The above-referenced amendment is conditionally approved upon receipt of seven clean copies. Please submit these copies by June 9, 2001. Once we receive these copies, we will send a stamped incorporated copy to you for insertion into your copy of the Mining and Reclamation Plan. A copy of our Technical Analysis is enclosed for your information.

Since this amendment is associated with Phase I bond release and includes copies of notification letters and the newspaper advertisement, we will contact you soon about scheduling a bond release inspection. If you have any questions, please feel free to call me.

Sincerely,

A handwritten signature in cursive script, reading 'Pamela Grubaugh-Littig'.

Pamela Grubaugh-Littig
Permit Supervisor

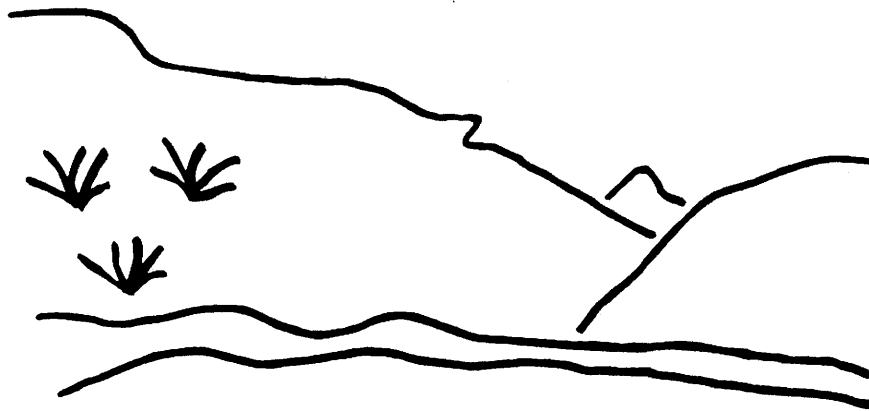
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Enclosure:

cc: Price Field Office

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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Cottonwood/ Wilberg Mine
Miller Canyon As-builts for Phase I Bond Release
C/015/019-BR99D-1
Technical Analysis
May 18, 2001

TABLE OF CONTENTS

INTRODUCTION.....	1
ADMINISTRATIVE INFORMATION.....	3
OPERATION PLAN.....	5
TOPSOIL AND SUBSOIL.....	5
RECLAMATION PLAN.....	7
APPROXIMATE ORIGINAL CONTOUR RESTORATION.....	7
BACKFILLING AND GRADING.....	7
MINE OPENINGS.....	8
TOPSOIL AND SUBSOIL.....	9
ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES.....	9
HYDROLOGIC INFORMATION.....	10
Ground-water monitoring.....	10
Surface-water monitoring.....	10
Gravity discharges.....	10
Water quality standards and effluent limitations.....	11
REVEGETATION.....	11
Mulching and other soil stabilizing practices.....	11
Standards for success.....	12
STABILIZATION OF SURFACE AREAS.....	13
MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS.....	14
Affected area boundary maps.....	14
Bonded area map.....	14
Reclamation backfilling and grading maps.....	14
Final surface configuration maps.....	14
BONDING AND INSURANCE REQUIREMENTS.....	15
General.....	15
Determination of bond amount.....	15

INTRODUCTION

TECHNICAL ANALYSIS

INTRODUCTION

On December 23, 1999, the Division received an application for Phase III bond release for the Miller Canyon portal area of the Cottonwood Mine. The proposal consisted of both an amendment and information for bond release. The bond release was advertised in the *Emery County Progress* April 25 through May 16, 2000. The Division's technical analysis of the original proposal was sent October 30, 2000, and PacifiCorp responded with a submittal the Division received February 20, 2001.

PacifiCorp desires to be released from reclamation liability but is not seeking bond reduction; however, in its cover letter and technical analysis of the first submittal, the Division explained that the ten-year period for extended liability and successful revegetation applies to this site. Although the site does not meet the requirements for Phase III bond release, it may meet the requirements for Phase I bond release.

The portals in Miller Canyon are not accessible by vehicle, and the only disturbances are the portals and immediately adjacent areas. Total disturbance is 0.02 acres. Reclamation consisted of installing stoppings in the portals, installing French drains, backfilling and topsoiling them, and applying revegetation techniques. Most backfill material came from areas adjacent to the portals, but topsoil was brought by helicopter from the Cottonwood Fan Portals. The helicopter also brought in woody material that helps the portals blend with surrounding areas while also providing erosion control.

PacifiCorp has adequately addressed all deficiencies in the original application, which included a lack of revegetation success standards, drawings of the reclaimed area, and information about water discharges from the portals. The amendment can now be approved. The Division will now schedule and conduct a bond release inspection and compile a decision document for Phase I bond release.

Page 2
C/015/019-AM99D-1
May 18, 2001

INTRODUCTION

ADMINISTRATIVE INFORMATION

ADMINISTRATIVE INFORMATION

Regulatory Reference: R645-301-880.100, R645-301-880-200

Analysis:

The applicant is required to submit the bond release application during a season when it is possible to evaluate the success of reclamation. The Division received the application December 23, 1999, which is not normally a time when it is possible to easily view or gain access to the site. However, since the Division has delayed analyzing the bond release application, the timing of the submittal is not critical.

The applicant did not originally submit copies of letters notifying land owners and governments agencies of the bond release application, but the Division received copies of these letters on April 19, 2000. Copies of these letters have now either been included or are proposed to be included in Attachment 6 of Appendix XXII in the mining and reclamation plan.

On May 19, 2000, the Division received a copy of the affidavit of publication for the public notice that was published in the *Emery County Progress* April 25 through May 16, 2000. The applicant has now proposed to include this in Attachment 8 of Appendix XXII.

Findings:

Information in the proposal is adequate to meet the requirements of this section of the regulations.

Page 4
C/015/019-AM99D-1
May 18, 2001

ADMINISTRATIVE INFORMATION

OPERATION PLAN

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

The soils which were used to reclaim the site originated at the Cottonwood Fan Portals and have been stockpiled at the Cottonwood /Wilberg waste rock site since 1995. According to the MRP Order-III survey, the Cottonwood Fan Portal soils fall within map unit AbG, very stony sandy loams derived from sandstone and shale. The Order-I survey in volume 11 describe the fan portal soils as similar to the "Map Unit A, Lithic Ustorthents." Characteristics of this soil are a very stony sandy loam about four inches thick and pale brown, very cobbly silt loam about 10 inches thick. The soil has a low water holding capacity. The erosion hazard is very high when the soil is bare.

Soil pile "B" will be utilized for this project. Approximately 7 CY of topsoil will be required to replace 18" of topsoil on each opening. Appendix #2 contains 1995 soil sampling information from piles "A", "B", and "C." Although it is not clear which of the reported samples is "B," all of the results reported are satisfactory. A more complete discussion of the soils is found in Volume 11 of the MRP.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

Page 6
C/015/019-AM99D-1
May 18, 2001

OPERATION PLAN

RECLAMATION PLAN

RECLAMATION PLAN

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The applicant met the general requirements for restoring the site to the approximate original contours. The reclaimed topography blends into the surrounding topography. French drains allow any water that will drain from the mine to mimic natural seeps in the area. Photographs in Appendix XXII show the operational and reclaimed phases of the Miller Canyon site. The photographs show that the reclaimed site is similar in grade to the surrounding area.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

The general engineering requirements for backfilling and grading are to restore the site to the approximate original contours; eliminate all highwalls, spoil piles and depressions; achieve a postmining long term static safety factor of 1.3. While no detailed premining contour maps and cross section of the site exist, the photographs of the surrounding area and postmining contour maps and cross section support the claim that the breakouts were in a near vertical face. Therefore, the highwalls will be eliminated if the permittee seals and backfills the port face ups.

The portals were backfilled as shown on the drawing entitled *Cottonwood Mine Miller Canyon Breakouts Plan View & Cross Section*. The cross sections show that the reclaimed slopes have angles less than 2 H to 1 V. The permittee did not give the Division detailed slope stability analysis for the backfilled slopes. Instead they used empirical methods based on slope height, slope angle and stability of similar slopes. The Division reviewed the stability analysis and agrees with the findings.

From information in Appendix XXII, the Division found that the site had been restored to the approximate original contours. See the AOC section for more details.

The area should not have had any spoil piles or large depressions since surface activities were limited to the construction of the breakouts. The photographs in Appendix XXII do not show any spoil piles or large depressions. In the December 23, 1999, submittal, the applicant states that all non coal and coal waste was removed from the site.

All coal seams that were exposed by mining have been covered. If naturally occurring coal outcrops do exist they were not the result of coal mining and the Division will not require the permittee to cover the natural coal outcrops.

Water seeps from Portal #1 at a rate of 3gpm. "Minor" seeps occur at portals #2 and #3. Attachment 4 shows the typical cross-section of the French drain created in each portal to a depth of six inches with six inch rock material. The drain was covered with larger rock material and then soil. Soil was placed eighteen inches thick and litter was placed on the soil to control erosion. Photos of the process were located in Attachment 5 of the current mining and reclamation plan.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

The Miller Canyon portals were sealed according to a plan approved by MSHA and the Division. Seals were placed in the portals and then the entrances backfilled. Due to natural cliff failure the backfill did not extend to the seal. A cross section of the site showing how the portals were sealed is Appendix XXII. Because the portals are in a remote location, the Division is not concerned with the public or wildlife gaining access to the mine through the Miller Canyon portals even if the backfill does not extend to the seals.

Findings:

RECLAMATION PLAN

Information provided in the application is adequate to meet the requirements of this section of the regulations.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Initial estimates were that each portal would be filled with 41 CY of rock material to create a French Drain. The rock was to be covered with a filter liner. On top of the liner, approximately 7 CY of soil was to be placed to a depth of 18 inches. Litter and branches were to be incorporated into the slope to add stability. The surface was to be roughened, seeded, and raked by hand.

The as-built information indicates that the helicopter imported 50 cubic yards of material (rock and soil), and the remainder of the yardage (approximately 100 yards?) came from the adjacent area. Otherwise, the activity proceeded as planned with 18 inches of soil applied to the rock fill and litter and branches strewn over the surface for stability and aesthetics.

A tally of subsoil volume of Pile B has been included with the Miller Canyon Appendix XXII, Attachment #2. The tally shows 209 cubic yards remaining in subsoil pile B. This volume is in accordance with the "approximately 200 yards" reported in Section 230, page 4, of the Soils Chapter, Volume 11 of the MRP.

Findings:

Information provided in the proposed amendment is considered adequate to meet the requirements of this section.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

No roads are associated with the Miller Canyon portals.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Ground-water monitoring

There is no information or evidence that the portal area discharged flows prior to mining or prior to development of the breakouts. Although flows appear to be low at this point in time, a question exists whether the portals can transmit flow after bond release. A Division representative talked to Dennis Oakley on October 13, 2000. Mr. Oakley stated that flow coming from the portals is unlikely because the portals are sealed. He also said that the flow currently coming from the portal is caused by seepage from sandstone channels in the facies above the mine. There is seepage in many areas at the same stratigraphic level. Map HS-3 shows the mapped channel sands. There is a high potential that the seeps existed prior to mining.

The Trail Mountain tunnel, consisting of the belt and roadway portal, are lower in elevation and dip than the Miller Canyon portals, as shown on Map HM-3. This being the case, water filling the mine voids would tend to flow from the Trail Mountain tunnel portal first if sections of the mine were filled and not sealed. It is unclear at this point how the Trail Mountain tunnel will be sealed or what function it will take at the time of mine closure. It is also not clear if this portal will prevent water from backing up against the Miller Canyon seals.

Surface-water monitoring

Monthly monitoring has taken place at the mine in compliance with provisions of the UPDES permit. The applicant's authorization to discharge expires October 31, 2002.

Gravity discharges

The three Miller Canyon Portals were temporarily sealed in 1984 following the Wilberg Mine fire and permanently sealed in 1989. A pipe was installed in the seal of the eastern (#1) portal and extended at least 500 feet down the canyon to facilitate the collection of water samples. Initially, there was almost no discharge, with only five sporadic discharges, ranging from 4 to 25 gpm, measured between October 1986 and November 1988.

RECLAMATION PLAN

Water started flowing consistently beginning in April 1989, when discharge jumped to 70 gpm. The highest discharge was 78 gpm in August 1989, after which flow-volume trended downward. There were some high flows in the spring of 1991, flow-volumes decreased significantly in 1994, and there has been no reported discharge since July 1996. In May 1999 it was discovered that the pipe had been pinched off by caving of the portal openings and that water was flowing from the seals, over the rock ledge, and to the canyon floor, where it dissipates within a few hundred feet: Flow from portal #1 was estimated at 3 gpm.

It is unknown how long the pipe was pinched-off and what effect this had on the accuracy of flow measurements. Photos taken in June 1999 during backfilling of the portals show water seeping from the top of the Star Point Sandstone ledge just below the portals: French drains were installed in 1999 in the base of the fill to prevent slope failure due to saturation. (The water-sampling pipe was also removed at that time, and the UPDES monitoring point is now in the stream bed of Miller Canyon near the confluence with Cottonwood Creek).

Water quality standards and effluent limitations

The combined disturbed area for the portals is .02 acres. The amount of disturbed runoff and sediment yield are very small. The reclaimed area was pocked to retain any runoff and control erosion. The applicant has conformed to UPDES water quality standards in the past when water was flowing from the discharge pipe. The location of the UPDES monitoring point has been changed and as a result the seeps from the mine area do not reach the monitoring site.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Mulching and other soil stabilizing practices

In 1999, the applicant proposed a specific plan for reclaiming the portals in Miller Canyon. Before this, the approved mining and reclamation only said these portals would be sealed from inside the mine. There was no other information about what reclamation methods would be used. The plan does not say the portal areas will not be revegetated.

Appendix XXII of the current mining and reclamation plan is essentially a description of what reclamation activities occurred at the site, so there are no changes to this section under the proposed amendment. The portals were permanently sealed in 1987, and they were backfilled and seeded in 1999. The reclamation work done in 1999 included establishing a water discharge point in portal No. 1, backfilling with rock, bringing in soil material by helicopter, spreading this material and soil from adjacent areas by hand, incorporating mulch, seeding, and covering the areas with straw mulch and netting. Rocks and tree branches were also brought in by helicopter to help anchor the netting and to make the sites blend as well as possible with adjacent areas.

The work the applicant did to restore the area to a natural appearance is commendable, and in 2000, the Board of Oil, Gas and Mining gave an Earth Day Award for this reclamation work.

Standards for success

The postmining land use in the area of the portals is a wildlife habitat. The requirements of R645-301-356 for this use are that the vegetation is judged on the basis of tree and shrub stocking and vegetative ground cover. Specific tree and shrub stocking density requirements are determined by the Division in consultation with appropriate wildlife management agencies.

According to the application, a reference area will be located adjacent to the reclaimed portals, and cover and diversity of the reclaimed area will be compared with this reference area. The application also discusses specific methods for measuring cover and judging whether it is adequate. These methods are in accordance with the performance standards and are acceptable.

The application does not specify a particular area as the reference area, but the Vegetation Information Guidelines are very flexible about the type of standard to be applied when the area of the disturbance is less than one acre. Division biologists have discussed the standard with the applicant's personnel and agreed that an unspecified undisturbed area adjacent to the portals could be used. Because the disturbed areas are very small, it should be possible to measure all of the vegetation on them rather than taking samples. By doing this, it would not be necessary to apply statistical tests.

The woody plant density success standard has been set at zero shrubs and trees per acre. The Division feels the site can meet the postmining land use without having any shrubs or trees as long as there is as much vegetation cover as in adjacent areas and erosion is being controlled. Wildlife can gain access to the site, and the area contains elk winter range. However, shrubs are not as important for elk forage as they are for some other big game species, and the extremely steep terrain and limited amount of forage on the slope restrict the value of the area for big game habitat.

At the time of bond release, similarity between the reclaimed area and the corresponding

RECLAMATION PLAN

reference area will compare life forms and/or species present in each community by using one of the similarity indexes in Appendix B of the Vegetation Information Guidelines.

Regulation R645-301-357 requires a period of extended responsibility for successful revegetation after the last augmented seeding, irrigation, or other work. This period is five years for areas with more than 26 inches of annual precipitation and ten years for areas with less than 26 inches of precipitation. It is assumed that the period for the Miller Canyon portals is ten years, and the application shows a ten-year monitoring schedule. Although the area would be checked yearly for pest and erosion problems, the revegetation inventory for bond release would only be done in the ninth and tenth years.

According to the application, rills and gullies will be filled and seeded if they develop, and the application says this repair work will follow regulations R645-301-357.360 through R645-301-357.365. The applicant needs to be aware that repairing rills and gullies, whether or not they are reseeded, can result in increasing the liability period for successful reclamation.

The success standards proposed in the application meet regulatory requirements and can be approved.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Areas were stabilized by the installation of a French drain. Straw was incorporated into the soil as the surface was roughened (as stated on page 2). Seed was broadcast and raked into the surface. Straw mulch and netting covered the seeded surface. Large litter was placed on the netting surface.

Annual monitoring will include inspection for rills and gullies. When present, they will be filled and the soil reseeded.

Findings:

The information provided is adequate for the purposes of this regulation.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected area boundary maps

The applicant has supplied the required maps and information to analyze the Miller Canyon portal site. Map HC-3 and Appendix XXII provide the documentation to describe the portal site, the extent of disturbance, reclamation activities, and the surface configuration of the portal area.

Bonded area map

The permittee did not give the Division any bonded (disturbed area) maps for the Miller Canyon area. Due to the small size of the disturbed area detailed disturbed area maps boundary maps are not needed.

Reclamation backfilling and grading maps

The permittee did not give the Division any backfilling or grading maps in the bond release package. The permittee included a topographic map and cross sections of the reclaimed portals. The map and cross sections were certified by a professional engineer.

Final surface configuration maps

The permittee did include any final surface configuration (topographic) maps in the bond release package.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.

RECLAMATION PLAN

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

The applicant is required to submit the bond release application during a season when it is possible to evaluate the success of reclamation. The Division received the application December 23, 1999, which is not normally a time when it is possible to easily view or gain access to the site. However, since the Division has delayed analyzing the bond release application, the timing of the submittal is not critical.

The applicant submitted copies of letters it sent to owners of land in the area and to local, state, and federal agencies. The application also includes a copy of the affidavit of publication for the public notice that was published in the *Emery County Progress* April 25 through May 16, 2000.

The current mining and reclamation plan contains concurrence letters from the Forest Service and the state Division of Wildlife Resources, and the application has a concurrence letter from the Bureau of Land Management. The Bureau of Land Management said they have no objections to the release of liability for the breakouts.

Determination of bond amount

The permittee does not seek any bond reduction for the Miller Canyon portals. Since no bond reduction is sought, the Division will not recalculate the bond at this time.

Findings:

Information provided in the application is adequate to meet the requirements of this section of the regulations.